

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Fidelity Exploration and Production Company

Well Name/Number: Fee/Siewing 32-18

Location: SW NE Section 18 T32N R33E

County: Phillips, MT; Field (or Wildcat) W/C

Air Quality

(possible concerns)

Long drilling time: No, 10 to 15 days drilling time.

Unusually deep drilling (high horsepower rig): No, a single or double drilling rig to drill a vertical hole to the Sawtooth Formation, 3048' TD.

Possible H2S gas production: Yes, H2S gas possible.

In/near Class I air quality area: No class I air quality area, in the area of review.

Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No special concerns – using a single or double drilling rig to drill a vertical hole to the Sawtooth Formation, 3048' TD. Gas gathering system exists in this area, Bowdoin Gas Field. H2S gas can be flared under Board Rule 36.22.1220 or sweetened and sold through the existing gas gathering system.

Water Quality

(possible concerns)

Salt/oil based mud: No, surface hole will be drilled with freshwater. Main hole will be drilled with freshwater and freshwater drilling mud.

High water table: Possible high water table in the area of review. Location is in a flood irrigated field.

Surface drainage leads to live water: No, closest drainage is Milk River, about 3/8 of a mile to the southwest and south from this location.

Water well contamination: No, closest water wells are about 5/8 of a mile to the northeast and 1 mile and further from this location in any direction. This well will drill with freshwater and set 13 3/8" Conductor casing to 200' and cement to surface. Well will be drill with freshwater based drilling fluids from base of Conductor casing to 1900' and set 8 5/8" surface casing from surface to 1900' TD and cement to surface. Will drill from base of surface casing to 3048' into the Sawtooth Formation and if productive will set 5 1/2" production casing and cemented in.

Porous/permeable soils: No, "Gumbo" clay soils.

Class I stream drainage: No Class I stream drainages.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

- ☐ Berms/dykes, re-routed drainage
- ☒ Closed mud system
- ☒ Off-site disposal of solids/liquids (in approved facility)
- ☐ Other: _____

Comments: Freshwater mud system to be used on surface hole. Freshwater mud system will be used out from under surface casing to 3048' TD. Fluids in the lined reserve pit will be trucked to a permitted Class II Disposal. Closed loop mud system will be used. Cuttings will be trucked offsite to an approved disposal. No concerns.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, stream crossings anticipated.

High erosion potential: No, small cut, up to 1.0' and small fill, up to 0.0', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, a large location, 200X240' size required.

Damage to improvements: Slight, surface use is flood irrigated cultivated land.

Conflict with existing land use/values: Slight

Mitigation

- ☐ Avoid improvements (topographic tolerance)
- ☐ Exception location requested
- ☒ Stockpile topsoil
- ☐ Stream Crossing Permit (other agency review)
- ☒ Reclaim unused part of wellsite if productive
- ☐ Special construction methods to enhance reclamation
- ☒ Other: Requires DEQ General Permit for Storm Water Discharge Associated

with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be from existing county road, Milk River Road. About 5/8 of a mile of new road will be constructed into this location off the existing county road. Freshwater drill cuttings and mud solids will be disposed of in an approved offsite disposal. Drilling fluids will be trucked to a Class II Disposal. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about 3/8 miles to the south, 5/8 of a mile to the east and about 7/8 of a mile to the northeast from this location. The town of Saco, Montana is about 8.6 miles to the southeast from this location.

Possibility of H2S: Yes, possible H2S.

Size of rig/length of drilling time: Single or double derrick drilling rig, about 10 to 15 days drilling time.

Mitigation:

- ☒ Proper BOP equipment
- ☐ Topographic sound barriers
- ☐ H2S contingency and/or evacuation plan
- ☐ Special equipment/procedures requirements
- ☐ Other: _____

Comments: Operational BOP and adequate surface casing should mitigate any problems. No concerns.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: Nelson Reservoir, about 1.5 miles to the west, Nelson State Recreation Area, about 3.6 miles to the southwest, Cole Ponds State Fishing Area, about 1.5 miles to the northeast and Sleeping Buffalo Hot Springs, about 4 miles to the southwest from this location.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Threatened or endangered species identified in this county are the Pallid Sturgeon, Piping Plover, Whooping Crane and the Black-Footed Ferret. Candidate species is the Greater Sage-Grouse and Sprague's Pipit. NH tracker website lists three (3) "Species of Concern" in T32N R33E. They are the Great Blue Heron, Greater Sage-Grouse and Black Tern.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Private surface flood irrigated land. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Private surface flood irrigated land. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: Well is a wildcat, until production is established, no social or economic impact can be assessed.

Remarks or Special Concerns for this site

Well is to be drilled vertical hole to the Sawtooth Formation, 3048' TD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: February 13, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology GWIC website

(Name and Agency)
Phillips County water wells
(subject discussed)
February 7, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Phillips County
(subject discussed)

February 7, 2012
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T32N R33E
(subject discussed)

February 7, 2012
(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____